

ABSTRACT OF THE DISCLOSURE

An optical switch, preferably an add/drop switch, includes a minimal number of two-state switching arrangements, thereby facilitating a reduction of switch complexity. Light pulses entering the switch via a given input port may be directed to either a corresponding output port or a corresponding drop port by the operation of the switching arrangements. Light pulses entering the switch via a given add port may be directed to a corresponding output port or may be disbursed by the operation of the switching arrangements. The switching arrangements are toggled between reflective and transmissive states. In the preferred embodiment, the two-state switching arrangements are controlled by the manipulation of index matching fluid within trenches. Additionally, in the preferred embodiment, the switching arrangements are configured such that a given light pulse interacts with only one trench, thereby minimizing the overall signal loss and loss non-uniformities within the switch.